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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,574	07/15/2005	Lothar Puppe	13077*98 (STA 196)	5269
23416 7590 06/29/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899				
EXAMINER				
NWAONICHA, CHUKWUMA O				
ART UNIT		PAPER NUMBER		
1621				
MAIL DATE		DELIVERY MODE		
06/29/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/520,574

Applicant(s)

PUPPE ET AL.

Examiner

CHUKWUMA O. NWAONICHA

Art Unit

1621

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-23 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date 12 May 2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 12 May 2009 has been entered.

Current Status

Claims 1-12 and 14-23 are pending in the application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Objection

Claim 15 is objected for depending on cancelled claim 13. Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 is indefinite because of the claim recites a "reaction temperature". It is not clear what temperature Applicants are claiming. Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Andersson et al., {US 5,603,805}.

Andersson et al. discloses applicants claimed silica sol. It should be noted that zeta potential and the IR band position are inherent properties of SiO₂ or silica sol and do not constitute a patentable distinction. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step.

Claims 14-20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Du Pont De Nemours and Company, {GB 1202303}.

Yates discloses applicants claimed silica sol. It should be noted that zeta potential and the IR band position are inherent properties of SiO₂ or silica sol and do not

constitute a patentable distinction. Applicants have claimed a product by way of a product by process claim. The Examiner did not give any patentable weight to the process step.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-12 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du Pont De Nemours and Company, {GB 1202303} in view of Andersson et al., {US 5,603,805}.

Applicants claim a process for the preparation of a silica sol comprising reacting a fresh sol with guanidine carbonate in the presence of a base (sodium water glass, potassium water glass, potassium hydroxide, sodium hydroxide and combinations

thereof) at a reaction temperature and at a pH of from 8 to 12, the pH being measured at the reaction temperature; wherein all the variables are as defined in the claims

Determination of the scope and content of the prior art (M.P.E.P. §2141.01)

Du Pont De Nemours and Company teaches a process for preparing silica sol comprises a BET surface area in excess of 100 m²/g and comprising reacting a silica with guanidine compound in the presence of a base at a reaction temperature of about 79°C and at a pH of about 9 to 12; wherein all the variables are as defined in the specification. See page 2, column 1, lines 27-50, page 3, column 1, lines 1-55, page 3, column 2, lines 89-120, and Examples 1 and 2.

Ascertainment of the difference between the prior art and the claims (M.P.E.P. §2141.02)

Du Pont De Nemours and Company process of preparation of silica sol by reacting guanidine compound with a sol in the presence of a base differs from the instantly claimed process in that Du Pont De Nemours and Company teaches a process that employed calcium hydroxide while Applicants claim a process that employs a base including sodium water glass, potassium water glass, potassium hydroxide, sodium hydroxide and combinations.

However, the secondary reference of Andersson et al. teach a process for preparing silica sol in the presence of a base comprising alkali water glass, sodium water glass and potassium water glass. See Example 1b.

Finding of prima facie obviousness—rational and motivation (M.P.E.P. §2142-2143)

The instantly claimed process of preparation of silica sol by reacting guanidine compound with a sol in the presence of a base would have been suggested to one of ordinary skill because one of ordinary skill wishing to obtain silica sol is taught to employ the processes of Du Pont De Nemours and Company and Andersson et al.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the process conditions (batch/continuous, concentration of the base, reactants, temperature and pressure) from the teachings of Du Pont De Nemours and Company and Andersson et al. to arrive at the instantly claimed method for making silica sol by reacting guanidine compound with a sol in the presence of a base. Said person would have been motivated to practice the teaching of the references cited because they demonstrates that silica sol are useful industrial raw materials, especially in paper industry. The Examiner notes that variation the reaction conditions, for example, batch/continuous, concentration of the reactants, catalyst, temperature and pressure in a chemical reaction is a well-known chemical practice to optimize the process efficiency of the system and does not constitute a patentable distinction absent unexpected or unobvious results. Additionally, simply reversing the order of steps in a multi-step process is not a patentable modification absent unexpected or unobvious results. Ex parte Rubin, 128 U.S.P.Q. 440 (P.O.B.A 1959).

Moreover, all the claimed elements were known in the prior art references cited and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The instantly claimed invention would therefore have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Chukwuma O. Nwaonicha/
Examiner, Art Unit 1621

/Karl J. Puttlitz/
Primary Examiner, Art Unit 1621